
What is claimed is:

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1. A method for tracking a requested signal, the method comprising:
receiving a request for the requested signal;
generating transaction identification data which identifies the received request;
including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal.
2. The method of Claim 1 where including comprises:
retrieving the basis signal; and
including the basis signal in the requested signal to form the watermarked signal in such a manner that the pattern is embedded in the watermarked signal and can be recognized in the watermarked signal.
3. The method of Claim 2 wherein including the basis signal comprises:
logically dividing the basis signal into segments; and
for each segment of the basis signal,
adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern has a first logical value; and
subtracting the segment of the basis signal to the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

4. The method of Claim 1 further comprising:
sending the watermarked signal in response to the request for the requested signal.
5. The method of Claim 1 wherein including comprises:
selecting watermarked signal fragments representing a first logical value for
corresponding portions of the pattern which have the first logical value;
selecting watermarked signal fragments representing a second logical value for
corresponding portions of the pattern which have the second logical value; and
combining the watermarked signal fragments representing the first and second
logical values to form the watermarked signal.
6. The method of Claim 5 wherein the watermarked signal fragments are compressed
such that combining the watermarked signals fragments forms the watermarked signal in a
compressed form.
7. A method for enabling embedding of transaction-specific identification data into a
requested signal, the method comprising:
logically dividing the requested signal into segments;
for each segment,
embedding a first logical value in the segment to form a first embedded
segment;
embedding a second logical value in the segment to form a second
embedded segment; and
including both the first and second embedded segments in a composite
signal.
8. The method of Claim 7 further comprising:
for each of the segments of the requested signal:

selecting from first and second embedded segments of the composite signal according to a corresponding bit of the transaction-specific identification data.

9. The method of Claim 8 further comprising:

combining the selected embedded segments of the composite signal to form a watermarked signal which includes the transaction-specific identification data embedded therein.

10. The method of Claim 7 wherein including both the first and second embedded segments in a composite signal comprises:

including the first embedded segment in a first frame;
compressing the first frame to form a first compressed frame;
including the second embedded segment in a second frame;
compressing the second frame to form a second compressed frame; and
including both the first and second compressed frames in the composite signal.

11. The method of Claim 10 wherein including both the first and second embedded segments in a composite signal further comprises:

determining that the first and second compressed frames are equivalent; and
including a single compressed frame in the composite signal to represent both the first and second compressed frames.

12. A method for embedding transaction-specific identification data into a requested signal, the method comprising:

retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a

second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal, selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein.

13. The method of Claim 12 wherein the first and second marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

14. A computer-readable storage medium on which is stored computer code which, when executed by a computer, causes the computer to enable tracking a requested signal by:

- receiving a request for the requested signal;
- generating transaction identification data which identifies the received request;
- including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal.

15. The computer-readable storage medium of Claim 14 where including comprises:

- retrieving the basis signal; and
- including the basis signal in the requested signal to form the watermarked signal in such a manner that the pattern is embedded in the watermarked signal and can be recognized in the watermarked signal.

16. The computer-readable storage medium of Claim 15 wherein including the basis signal comprises:

logically dividing the basis signal into segments; and

for each segment of the basis signal,

adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern has a first logical value; and

subtracting the segment of the basis signal to the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

17. The computer-readable storage medium of Claim 14 wherein the computer code, when executed by the computer, further causes the computer to enable tracking a requested signal by:

sending the watermarked signal in response to the request for the requested signal.

18. The computer-readable storage medium of Claim 14 wherein including comprises:

selecting watermarked signal fragments representing a first logical value for corresponding portions of the pattern which have the first logical value;

selecting watermarked signal fragments representing a second logical value for corresponding portions of the pattern which have the second logical value; and

combining the watermarked signal fragments representing the first and second logical values to form the watermarked signal.

19. The computer-readable storage medium of Claim 18 wherein the watermarked signal fragments are compressed such that combining the watermarked signals fragments forms the watermarked signal in a compressed form.

20. A computer-readable storage medium on which is stored computer code which, when executed by a computer, causes the computer to enable embedding of transaction-specific identification data into a requested signal by:

logically dividing the requested signal into segments;

for each segment,

embedding a first logical value in the segment to form a first embedded segment;

embedding a second logical value in the segment to form a second embedded segment; and

including both the first and second embedded segments in a composite signal.

21. The computer-readable storage medium of Claim 20 wherein the computer code, when executed by the computer, further causes the computer to enable embedding of transaction-specific identification data into a requested signal by:

for each of the segments of the requested signal:

selecting from first and second embedded segments of the composite signal according to a corresponding bit of the transaction-specific identification data.

22. The computer-readable storage medium of Claim 21 wherein the computer code, when executed by the computer, further causes the computer to enable embedding of transaction-specific identification data into a requested signal by:

combining the selected embedded segments of the composite signal to form a watermarked signal which includes the transaction-specific identification data embedded therein.

23. The computer-readable storage medium of Claim 20 wherein including both the

first and second embedded segments in a composite signal comprises:

- including the first embedded segment in a first frame;
- compressing the first frame to form a first compressed frame;
- including the second embedded segment in a second frame;
- compressing the second frame to form a second compressed frame; and
- including both the first and second compressed frames in the composite signal.

24. The computer-readable storage medium of Claim 23 wherein including both the first and second embedded segments in a composite signal further comprises:

- determining that the first and second compressed frames are equivalent; and
- including a single compressed frame in the composite signal to represent both the first and second compressed frames.

25. A computer-readable storage medium on which is stored computer code which, when executed by a computer, causes the computer to embedding transaction-specific identification data into a requested signal by:

- retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal, selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein.

26. The computer-readable storage medium of Claim 25 wherein the first and second

marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

27. A computer system comprising:
- a processor;
 - a memory coupled to the processor; and
 - a watermarker which executes in the processor from the memory and which, when executed, enables tracking of a requested signal by:
 - receiving a request for the requested signal;
 - generating transaction identification data which identifies the received request; and
 - including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal.
28. The computer system of Claim 27 where including comprises:
- retrieving the basis signal; and
 - including the basis signal in the requested signal to form the watermarked signal in such a manner that the pattern is embedded in the watermarked signal and can be recognized in the watermarked signal.
29. The computer system of Claim 28 wherein including the basis signal comprises:
- logically dividing the basis signal into segments; and
 - for each segment of the basis signal,
 - adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern

has a first logical value; and

subtracting the segment of the basis signal to the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

30. The computer system of Claim 27 wherein the watermark, when executed, enables tracking of a requested signal by also:

sending the watermarked signal in response to the request for the requested signal.

31. The computer system of Claim 27 wherein including comprises:

selecting watermarked signal fragments representing a first logical value for corresponding portions of the pattern which have the first logical value;

selecting watermarked signal fragments representing a second logical value for corresponding portions of the pattern which have the second logical value; and

combining the watermarked signal fragments representing the first and second logical values to form the watermarked signal.

32. The computer system of Claim 31 wherein the watermarked signal fragments are compressed such that combining the watermarked signals fragments forms the watermarked signal in a compressed form.

33. A computer system comprising:

a processor;

a memory coupled to the processor; and

a blank watermark which executes in the processor from the memory and which, when executed, enables embedding of transaction-specific identification data into a requested signal by:

logically dividing the requested signal into segments;

for each segment,
 embedding a first logical value in the segment to form a first
embedded segment;
 embedding a second logical value in the segment to form a second
embedded segment; and
 including both the first and second embedded segments in a
composite signal.

34. The computer system of Claim 33 further comprising:

for each of the segments of the requested signal:

 selecting from first and second embedded segments of the composite
signal according to a corresponding bit of the transaction-specific identification
data.

35. The computer system of Claim 34 wherein the blank watermarker, when executed,
enables embedding of transaction-specific identification data into a requested signal by also:

 combining the selected embedded segments of the composite signal to form a
watermarked signal which includes the transaction-specific identification data embedded
therein.

36. The computer system of Claim 33 wherein including both the first and second
embedded segments in a composite signal comprises:

 including the first embedded segment in a first frame;
 compressing the first frame to form a first compressed frame;
 including the second embedded segment in a second frame;
 compressing the second frame to form a second compressed frame; and
 including both the first and second compressed frames in the composite signal.

37. The computer system of Claim 36 wherein including both the first and second embedded segments in a composite signal further comprises:

determining that the first and second compressed frames are equivalent; and
including a single compressed frame in the composite signal to represent both the first and second compressed frames.

38. A computer system comprising:

a processor;

a memory coupled to the processor; and

a watermarker which executes in the processor from the memory and which, when executed, embeds transaction-specific identification data into a requested signal by:

retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal, selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein.

39. The computer system of Claim 38 wherein the first and second marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

40. A computer-readable storage medium on which is stored a signal which comprises:

one or more segments of a subject signal;
for each of the segments,
a first segment instance representing a first logical value of portion of a
pattern which is embedded in the segment; and
a second segment instance representing a second logical value of the
portion embedded in the segment.

41. The computer-readable storage medium of Claim 40 wherein two or more
segments of the subject signal are represented in a composite frame; and
further wherein the composite frame includes the following frame instances:
- (i) the first segment instance of a first of the two or more segments of
the composite frame and the first segment instance of a second of the two or more
segment of the composite frame;
 - (ii) the first segment instance of the first segment of the composite
frame and the second segment instance of the second segment of the composite
frame;
 - (iii) the second segment instance of the first segment of the composite
frame and the first segment instance of the second segment of the composite
frame; and
 - (iv) the second segment instance of the first segment of the composite
frame and the second segment instance of the second segment of the composite
frame.

42. The computer-readable storage medium of Claim 41 wherein the frame instances
(i) through (iv) are compressed.

43. The computer-readable storage medium of Claim 40 wherein the first and second
segment instances or each of the segments are compressed.